"METHOD FOR PRODUCING A VIABLE SPEECH RENDITION OF TEXT"

ABSTRACT OF THE INVENTION

A method for producing a viable speech rendition of text based on dividing the words of

5   the sentence into component diphones. Analysis of the structure of the sentence is utilized to

correctly pronounce homographs. Proper inflection, based on the punctuation of the sentence, is

added to produce a more appealing rendition. The invention has particular application for

permitting blind persons to receive information previously in text form and, hence, unavailable.

The invention is highly versatile, user friendly and the overall flow of sounds highly

10   understandable. A phonetic dictionary is aligned so that each letter within each word has a single

corresponding phoneme. The aligned dictionary is analyzed to determine the most common

phoneme representation of the letter in the context of a string of letters before and after it. The

results for each letter are stored in a phoneme rule matrix. A diphone database is then created by

using a waive editor to cut 2,000 distinct diphones out of specially selected words. An algorithm

15   used with the invention selects a phoneme for each letter. Then, two phonemes at a time are used

to create a diphone, which are then read aloud by concatenating sounds from the diphone

database. Another algorithm is used to distinguish and use the correct form of homograph.

Finally, the invention uses prosodromic variation by adding inflection to the final word of a

sentence in accordance with punctuation, e.g. question marks, periods and exclamation marks, to

20   enhance the realisticness of the program. Three macros were created to allow aspects of the

program to run at the touch of a single button. A 98% accuracy rate has been achieved.